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Substrate sections having increased storage stability  
during their storage in a bag package, and process for  
their manufacture

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The invention relates to substrate sections which have been rendered pressure-sensitive adhesive and are sealed in bags so as to be protected against loss of active substance, the pressure-sensitive adhesive surface of which is covered by a carrier layer which at least partially projects beyond the said substrate sections and is divided by an incision, thus forming a release aid, through which incision pressure-sensitive adhesive may leak out in cold flow during storage and may cause agglutination with the bag.

It is known how to manufacture and use flat-shaped pressure-sensitive adhesive substrate sections. These may be, for example, active substance-containing transdermal therapeutic systems. If such systems contain volatile components, for example as active agents, there results the necessity of protecting the substrate sections which have been provided with these components against evaporation of the volatile components during the time span between manufacture and use, that is, during their storage up to their application.

This is achieved, for example, by providing the pressure-sensitive adhesive substrate sections with a detachable carrier layer so as to protect their pressure-sensitive adhesive surface and subsequently sealing the sections in a bag surrounding the same on all sides. Here it is convenient for the carrier layer to project beyond the pressure-sensitive adhesive surface of a substrate section so as to, on the one hand, facilitate the peeling of the carrier layer off the substrate layer prior to use, and, on the other hand, prevent the substrate sections from sticking to the package surfaces as a result of pressure-

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sensitive adhesive material leaking in cold flow. When the package is open only at one side, such sticking would make removing the laminate more difficult or even render it impossible.

To eliminate this problem, it has already been proposed to provide an incision in the detachable carrier layer, which results in easier detachment of the carrier layer and enables application of the pressure-sensitive adhesive substrate sections to the site of application in a patient. A disadvantage of this measure results from the fact that during storage of the packaged substrate sections it is still possible for the pressure-sensitive adhesive to leak out at the cutting edge of the detachable carrier layer by way of cold flow, it may thus cause extremely disadvantageous sticking of the sections to the surfaces of the package, so that withdrawing the laminate from a package which is open at one side is made even more difficult or impossible.

It is the object of the present invention to provide, in a substrate section of the kind mentioned in the introductory part of Claim 1, an embodiment of the carrier layer provided with a releasing aid, by means of which embodiment the leaking-out of pressure-sensitive adhesive in cold flow can be prevented easily and with simple means, thus facilitating easy withdrawal of substrate sections from a package which is open only at one side.

This object is achieved by the invention in a substrate section of the kind mentioned at the beginning hereof by the fact that to increase the storage stability the carrier layer is configured with two carrier layer sections which overlap each other in the area where they are joined together, preventing the leaking-out of adhesive.

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To gr at advantage, by means of this surprisingly simple embodiment of the carrier layer, the leakage of adhesive and thus any sticking to the packaging material is prevented, and the removal of the laminate when the package is open only at one side is facilitated without difficulty, while the detachability of the carrier layer from the substrate section remains undiminished.

A process for forming substrate sections comprising carrier layer sections, which carrier layer sections project beyond the said substrate sections and form a region of overlap, is characterized in that the said carrier layer sections are supplied with the pressure-sensitive adhesive substrate sections via a dispensing process, for example, according to WO 92/17237, after the carrier layer sections have been overlapped.

Further details, features and advantages of the invention will become apparent from the following explanation of an embodiment example represented schematically in the drawing.

Fig. 1 shows the substrate layer 1 in cross-section, comprising a backing layer 5 and a matrix 6 connected thereto. Said matrix may either be comprised entirely of a pressure-sensitive adhesive material or be rendered pressure-sensitive adhesive on its application surface by providing it with a pressure-sensitive adhesive layer (not shown). The pressure-sensitive adhesive surface or the pressure sensitive adhesive-rendered matrix 6, respectively, is covered by a carrier layer which projects beyond said matrix 6 at least partially and which according to the invention is configured with two carrier layer sections 2,3 which overlap each other in the region where they are joined.

Due to the fact that the carrier layer sections 2, 3 project beyond the matrix 6 at the side dges 7, 8 in a

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On account of the fact that the carrier layer 2,3, which is assembled in two parts for reasons of better detachability, is configured with a region of overlap 4, the said carrier layer prevents, also in this region, the leaking-out of pressure-sensitive adhesive in cold flow during a prolonged storage.

However, one may also take the measure of configuring both carrier layer sections 2, 3 to be wider, by an amount of half of the overlap, than half the width dimension of an undivided carrier layer 1.

A process for forming substrate sections 1 comprising carrier layer sections 2, 3 which project beyond the said substrate sections and form a region of overlap 4 is characterized in that the carrier layer sections 2, 3 are supplied with the pressure-sensitive adhesive substrate sections 1 after the said carrier layer sections 2, 3 have been overlapped.

The solution according to the present invention is surprisingly simple and optimally solves the task posed at the beginning hereof.